



US 20220104457A1

(19) **United States**(12) **Patent Application Publication**  
**Narita et al.**(10) **Pub. No.: US 2022/0104457 A1**(43) **Pub. Date: Apr. 7, 2022**(54) **GUIDANCE VEHICLE****B25J 9/00** (2006.01)(71) Applicant: **TOYOTA JIDOSHA KABUSHIKI**  
**KAISHA**, Toyota-shi Aichi-ken (JP)**B25J 9/16** (2006.01)**B25J 11/00** (2006.01)**G05D 1/02** (2006.01)(72) Inventors: **Saki Narita**, Toyota-shi Aichi-ken (JP);  
**Tetsuya Kanata**, Susono-shi  
Shizuoka-ken (JP); **Yozo Iwami**,  
Susono-shi Shizuoka-ken (JP); **Daisaku**  
**Honda**, Nagoya-shi Aichi-ken (JP);  
**Yuhei Katsumata**, Fuji-shi  
Shizuoka-ken (JP); **Hideki Fukudome**,  
Toyota-shi Aichi-ken (JP); **Takuya**  
**Watabe**, Hachioji-shi Tokyo-to (JP);  
**Naoko Ichikawa**, Shibuya-ku Tokyo-to  
(JP); **Yuta Maniwa**, Susono-shi  
Shizuoka-ken (JP); **Yuki Nishikawa**,  
Susono-shi Shizuoka-ken (JP); **Daisuke**  
**Ishii**, Sunto-gun. Shizuoka-Ken (JP);  
**Daisuke Sato**, Susono-shi (JP)(52) **U.S. Cl.**CPC ..... **A01K 15/02** (2013.01); **A01K 29/005**  
(2013.01); **A01K 27/004** (2013.01); **B25J**  
**9/0003** (2013.01); **G05D 1/0246** (2013.01);  
**B25J 9/163** (2013.01); **B25J 11/008**  
(2013.01); **G05D 1/0223** (2013.01); **B25J**  
**9/0009** (2013.01)(21) Appl. No.: **17/476,792**(22) Filed: **Sep. 16, 2021**(30) **Foreign Application Priority Data**

Oct. 2, 2020 (JP) ..... 2020-168057

**Publication Classification**(51) **Int. Cl.****A01K 15/02** (2006.01)**A01K 29/00** (2006.01)**A01K 27/00** (2006.01)(57) **ABSTRACT**

A guidance vehicle guides a dog for a walk, and includes a leash attachment, a distance sensor, and an electronic control unit. The leash attachment is configured to attach a leash that connects the dog. The distance sensor is configured to detect a dog-to-vehicle distance being a distance between the dog and the guidance vehicle. The electronic control unit is configured to execute a travel control of the guidance vehicle. The electronic control unit includes, as one of modes of the travel control, a walk guidance mode that causes the guidance vehicle to automatically travel along a walk route while guiding the dog to walk. The walk guidance mode executed by the electronic control unit includes a basic walk mode that controls the dog-to-vehicle distance so as to maintain a constant distance when the dog is moving along the walk route.

